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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,970	05/20/2004	Ernst Friedrich Ach	16755	8636

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EXAMINER

MATTHEWS, TERRELL HOWARD

ART UNIT PAPER NUMBER

3654

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/849,970

Applicant(s)

ACH, ERNST FRIEDRICH

Examiner

Terrell H. Matthews

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/19/2004</u> .   | 6) <input type="checkbox"/> Other: ____.                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically claim 1 is vague and indefinite because it is unclear as to what qualifies as a "flat-belt-like" support. Claim 2 is vague and indefinite because it is unclear as to what qualifies as "substantially" triangular and trapezium shaped.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2,5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baranda (WO 99/43589) in view of Heinz (2003/121729)

Referring to claims 1-4. Baranda discloses an "Elevator System Having Drive Motor Located Between Elevator Car and Hoistway Sidewall" as claimed. See Figs. 1-8 and respective portions of the specification. Baranda further discloses a drive motor (42) mounted at a head of an elevator shaft and having a drive pulley; an elevator car (16) movable in the elevator shaft; a counterweight (48) movable in the elevator shaft and arranged laterally of the elevator car (See Pg. 2 – Pg. 3 l. 17 & Fig. 2). Baranda further discloses a flat-belt-like support means supporting the elevator car by under looping and engaging the drive pulley, Baranda does not disclose the support means being a wedge-ribbed belt having a running surface facing the drive pulley and a plurality of ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction of the support means. Heinz discloses a "Lift Belt and System" as claimed. See Figs. 1-4 and respective portions of the specification. Heinz further discloses a flat belt support means (10) being a wedge-ribbed belt having a running surface facing the drive pulley and a plurality of ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction of the support means (See Fig 1). Heinz further discloses ribs and grooves that are substantially triangular and trapezium shaped in cross section (See Fig. 1). Additionally, it should be noted that Heinz discloses wherein the ribs and grooves are formed with lateral flanks at an angle in a range between 80° to 100° and approximately 90° (See Sect. 0026). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda to include the teachings of Heinz and include a wedge-ribbed

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belt that contained ribs and shaped and angled grooves so that the belt could provide greater traction capability and a higher lift capacity the elevator system.

Referring to claim 7. Baranda does not disclose that the drive pulley has an external diameter in a range of 70 to 100 millimeters. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda to include drive pulleys that were in the range of 70 to 100 millimeters so that greater torque and lifting capacity could be achieved.

Referring to claim 8. Baranda discloses that the car guide rail (60,64) is mounted on two opposite sides of the elevator car and two counterweight guide rails (62,66) mounted on a counterweight side of the elevator car and the drive motor with the drive pulley being mounted on a motor carrier (36) attached to one of the car guide rails and to the two counterweight guide rails (See Pg. 4 – Pg 5 l. 23 & Figs. 1-2).

Referring to claim 10. Baranda discloses an elevator wherein said drive motor and said drive pulley are mounted above a space in the elevator shaft taken up by said elevator car, a plane of said drive pulley being arranged vertically and at right angles to a car wall at a counterweight side of said elevator car and approximately in a middle of a car depth of said elevator car, a vertical projection of said drive pulley onto said counterweight side of said elevator car being outside a vertical projection of said counterweight side, and a part of a vertical projection of said drive motor being superimposed on said vertical projection of said counterweight side of said elevator car (See Figs. 1-2).

Referring to claims 11,13-14. Baranda discloses an elevator system wherein the belt extends from a support means fixing point below said drive pulley and in a region of a vertical projection of said drive pulley, downwardly to a side, which faces said elevator car of a periphery of a counterweight support roller, loops around said counterweight support roller, extends to a side remote from said elevator car of a periphery of said drive pulley, loops around said drive pulley and runs downwardly along a car wall at a counterweight side of said elevator car, loops by 90 around a respective car support roller mounted below said elevator car on each of two sides of said elevator car and runs along a car wall remote from said counterweight upwardly to a second support means fixing point in the elevator shaft. Baranda further discloses an elevator system having a drive motor mounted at the head of the elevator shaft and having a drive pulley for engaging the support, comprising a belt adapted to support the elevator car by underlooping and engaging the drive pulley. Baranda does not disclose that the belt is wedge-ribbed belt that has a running surface adapted to face the drive pulley and a plurality of substantially triangular-shaped and trapezium shaped ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction of the belt. Heinz discloses the belt is a wedge-ribbed belt that has a running surface adapted to face the drive pulley and a plurality of ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction of the belt (See Fig. 1). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus to include a belt as taught by Heinz so that greater traction could be achieved as well as a higher load capacity.

Referring to claim 12. Baranda does not disclose that the guide roller mounted at the bottom of the elevator car and engaging the wedge-ribbed belt, in which the guide roller has a plurality of ribs and grooves engaging the ribs and grooves of the wedge-ribbed belt for guidance of the wedge-ribbed belt. Heinz discloses the invention as discussed in detail above. Heinz further discloses that the belt has a ribbed pulley-engaging surface and that the guide rollers are grooved to receive the ribs on the belt. It would have been obvious to a person of ordinary skill in the art at the time of the invention in view of Heinz to modify the apparatus of Baranda to include guide rollers that had a plurality of ribs and grooves that engaged the ribs and grooves of the belt so that a elevator could receive greater traction and a higher load capacity.

Claims 1, 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baranda in view of Danhauer (2002/0098935).

Referring to claims 1, 5-6. Baranda does not disclose a wedge-ribbed belt that has a plurality of transverse grooves formed on the running surface or at least two wedge-ribbed belt strands arranged in parallel. Danhauer discloses a "Fabric Cushion V-Ribbed Belt" as claimed. See Figs. 1-2 and respective portions of the specification. Danhauer discloses a belt (10) with a plurality of ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction on the support means (See Sect. 0017 & Figs. 1-2). Furthermore, Danhauer discloses that the belt (10) is provided

with a plurality of transverse grooves (34) (See Sect. 0025). Additionally, it should be noted that the belt (10) has at least two wedge-ribbed belt strands arranged in parallel (See Figs. 1-2). It would have been obvious to a person of ordinary skill in the art to modify the apparatus of Baranda to include the teachings of Danhauer and provide a wedge-ribbed belt with a plurality of ribs and grooves formed in the running surface as well as transverse grooves and ribbed strands that so that the belt could provide better traction, increased flexibility, and a higher load capacity.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baranda in view of Heinz in further view of Faletto (6471012).

Referring to claim 9. Baranda does not disclose a brake unit mounted on the motor carrier for acting upon the drive pulley. Faletto discloses a "Pulley System For A Traction Sheave Elevator" as claimed. See Figs. 1-2 and respective portions of the specification. Faletto further discloses a brake acting on a drive pulley to prevent rope movement. Faletto further discloses that the brake could be positioned to act on the rope, on a pulley mounted on the elevator car, or on an auxiliary pulley (See Col. 5 l. 9-14). It should be noted that it is generally known in the field of art to provide a brake to act on the drive pulley to prevent movement. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda to include a brake unit to act on the drive pulley to prevent movement in order to slow and stabilize the elevator car.



***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrell H. Matthews whose telephone number is (571)272-5929. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

THM



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